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**Embryo sac of *Cassia*.**—W. T. SAXTON<sup>34</sup> has investigated the South American *Cassia tomentosa*, as growing in private gardens in Cape Town, South Africa. The usual linear row of four megaspores appears, but curiously enough the functioning spore is not the innermost one, but the one next to it. The embryo sac develops a tubular prolongation at the antipodal end, which is filled by a row of antipodal cells, as in certain Compositae. The number of chromosomes in the divisions of sporophytic nuclei is reported to be twelve.—J. M. C.

**Functionless chlorophyll.**—BONNIER long ago discovered that chlorophyll in some parasites appears to have lost its synthetic power. FRIEDEL<sup>35</sup> finds that in the ovaries of *Ornithogalum arabicum* the abundant chlorophyll has no synthetic power, or at least that the gas exchange is so slight as to be entirely masked by the respiratory gas exchanges. Ovaries of *O. umbellatum*, however, have vigorous synthetic powers.—H. C. COWLES.

**Gametophytes of gymnosperms.**—PORSCH,<sup>36</sup> in a general review of investigations upon the gametophytes of gymnosperms, has considered more than thirty papers, most of them published since 1903. The material is arranged systematically under Cycadales, Ginkgoales, etc., and is illustrated by a few well-chosen text figures. Some of the comments are very suggestive.—CHARLES J. CHAMBERLAIN.

**Codonothea.**—In 1903 SELLARDS described this form-genus from material obtained from the iron-clay concretions of Mazon Creek, Illinois. He has just reprinted<sup>37</sup> the essential features of this description, and expresses the belief that it is the microsporangiate structure of some of the Cycadofilices, probably of the Neuropteris type.—J. M. C.

**Apogamy in *Rumex*.**—MURBECK<sup>38</sup> has reported the discovery of apogamy in a form of *R. Acetosella* which he calls *angiocarpus*. This announcement comes by way of *Bot. Notiser* 1907:238.—J. M. C.

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<sup>34</sup> SAXTON, W. T., On the development of the ovule and embryo sac in *Cassia tomentosa*. Trans. S. Africa Phil. Soc. 18:1-5. pls. 1, 2. 1907.

<sup>35</sup> FRIEDEL, J., Sur un cas d'organe vert dépourvu de pouvoir assimilateur. Compt. Rend. Acad. Sci. Paris 142:1092, 1093. 1906.

<sup>36</sup> PORSCH, DR. OTTO, Ueber einige neuere phylogenetisch bemerkenswerte Ergebnisse der Gametophytenerforschung der Gymnospermen. Kritisches Sammelreferat. Festschrift des Naturwiss. Vereines an der Universität Wien. pp. 39. figs. 16. 1907.

<sup>37</sup> SELLARDS, E. H., Notes on the spore-bearing organ Codonothea and its relationship with the Cycadofilices. New Phytologist 6:175-178. 1907.

<sup>38</sup> MURBECK, S., Verh. Naturh. Verein. Preussisch. Rheinl. Bonn. 63<sup>2</sup>:—. 1907